THE OHIO STATE ENGINEER

MEMBER ENGINEERING COLLEGE MAGAZINES ASSOCIATED

JANUARY

AN ELECTRICAL ENGINEER IN JAPAN . . . CONFESSIONS OF CLARENCE . . . ENGINEERING 'ROUND ABOUT COLUMBUS . . . THE ENGINEER'S BOOKSHELF . . . MUSIC NOTES FOR ENGINEERS . . . WITHOUT PENCIL AND PAPER . . . QUADRANGLE SOCIETIES . . . THROUGH THE TRANSIT

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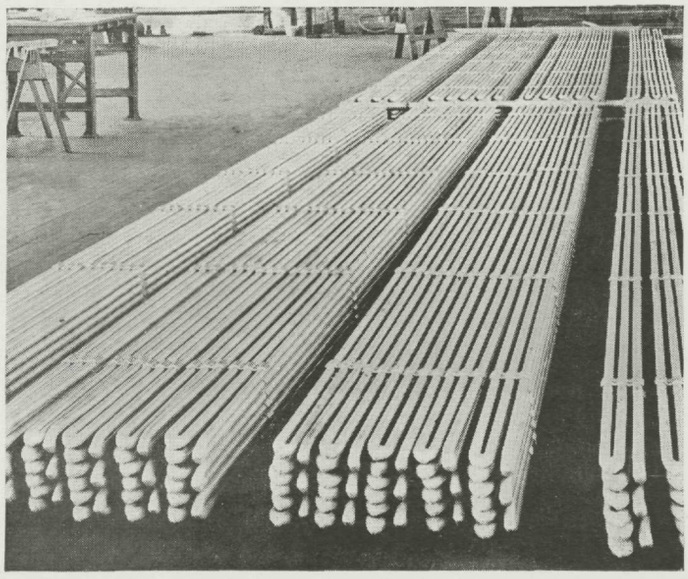
• 1936 •



SEVEN HUNDRED WELDS—were needed to make this assembly of aluminum piping.

New Metals Emphasize Desirability of Jointless Design

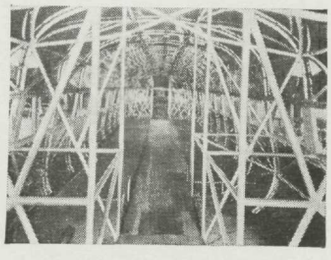
Welding Preferred Method for Fabricating Jointless Designs from New Materials

By **H. E. ROCKEFELLER***

Welding is an important aid in securing the full benefit of the newer light weight alloys, corrosion- and stain-resistant steels and other ferrous and non-ferrous metals. Jointless welded designs in these new metals make the finished product attractive in appearance, efficient and economical to use and enable it to be priced salably.

In All Industries

Fabrication by welding can be undertaken without heavy capital expenditures and carried out at low cost. Welding is used in every industry for maintenance, for construction and for the fabrication of many products. The welding of mechanical refrigerators and gas ranges is typical of its production applications. Other typical applications include welding of chromium steel for resistance to sea water corrosion on seaplane pontoons, welding aluminum fuel tanks for airplanes, welding of the frame work of alloy steel on the new high speed railroad trains, welding of stainless steel beer barrels and innumerable other familiar products.



HERE'S HOW—the framework of the light weight, streamlined rail cars for high speed is Linde-welded from chrome-molybdenum steel tubing.

Welding is Simple Production Tool

Welding is the preferred method of fabricating almost every design in modern metals. Jointless welding can be done rapidly with a minimum of preparation of the pieces to be joined. Under procedure control providing jigs for positioning pieces, production can be as rapid and as free from rejections as any highly developed factory process. From the plant equipment standpoint it is easy to adopt welding. From the personnel standpoint the welding technique is quickly acquired through instruction by competent engineers.

For Jointless Strength and Safety

Products fabricated by welding are jointless, leakproof, permanent and safe. Improved methods of testing make it possible to tell exactly what stresses or loads a jointless welded assembly can take. Metals of different compositions, providing the most suitable material for the service it is to perform, can be welded into sound unified assemblies forever free from any of the losses which occur from joint failures.

Specialized Welding Assistance

To utilize the new alloys and metals fully, the advice of competent engineers in welded design is advisable. The Linde Air Products Company, a unit of Union Carbide and Carbon Corporation, has for many years specialized in the development of new ways to use oxy-acetylene welding. Linde Engineers will gladly consult with you without obligation, and help you use welding and

IN JIG TIME—using jigs, welded joints can be made quickly in any commercial metal or alloy.

organize for welding production. This assistance can be secured by a telephone call to any Linde Sales Office. They are located at Atlanta — Baltimore, Birmingham, Boston, Buffalo, Butte—Chicago, Cleveland — Dallas, Denver, Detroit—El Paso—Houston—Indianapolis—Kansas City—Los Angeles—Memphis, Milwaukee, Minneapolis—New Orleans, New York—Philadelphia, Phoenix, Pittsburgh, Portland, Ore.—St. Louis, Salt Lake City, San Francisco, Seattle, Spokane and Tulsa.

Everything for oxy-acetylene welding and cutting—including Linde Oxygen, Prest-O-Lite Acetylene, Union Carbide and Oxweld Apparatus and Supplies—is available from Linde through producing plants and warehouse stocks in all industrial centers.

* Engineer, Development Section, The Linde Air Products Company, Unit of Union Carbide and Carbon Corporation.

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Published in the months of October, November, January, February, March, April, and May by the students in the College of Engineering, The Ohio State University, Columbus, Ohio. Subscription price, 72 cents (tax 3 cents) per year for seven copies; Single copies 14 cents each. Make checks and money orders payable to THE OHIO STATE ENGINEER.

Entered as second-class matter May 15, 1912, at the post office at Columbus, Ohio, under the Act of March 3, 1879. Acceptance for mailing at special rate of postage provided for in Section 1103, Act of October 3, 1917. Authorized December 8, 1922.